<table>
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<th>Outcome</th>
<th>Assessment Method</th>
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| **SLO1:** Students will demonstrate a basic conceptual understanding of modern astrophysics, which includes celestial coordinates, Kepler's laws, and stellar properties. | **Measure 1.1:** At least 80% of students will score 75% or higher on conceptual questions related to celestial coordinates, Kepler's laws, and stellar properties in the final exam administered in ASTR 231.  
**Measure 1.2:** At least 80% of students will score 75% or higher on celestial coordinates, Kepler's laws, and stellar properties as measured in midterm tests given in ASTR 231. The questions epitomize the content that students are supposed to learn in ASTR 231. The questions will be chosen by the course instructors. |
| **SLO2:** Students will apply their numerical and computational skills to solve astronomy problems. The topics associated with these problems include gravitation, Kepler's laws, astronomical measurements, and stellar evolution towards compact objects. | **Measure 2.1:** At least 80% of students will score 75% or higher on solving problems involving planetary interiors/surfaces, stellar atmosphere, and black hole spectra as measured in the final exams administered in ASTR 205 (Intelligent Life in the Universe), ASTR 210 (Black Holes in the Universe), and ASTR 306 (Planetary Astronomy).  
**Measure 2.2:** At least 80% of students will score 75% or higher on solving problems involving planetary interiors/surfaces, stellar atmosphere, and black hole spectra as measured in the homework assignments/projects given in ASTR 205 (Intelligent Life in the Universe), ASTR 210 (Black Holes in the Universe), and ASTR 306 (Planetary Astronomy). |
| **SLO3:** Students will perform an advanced astronomy-related experimental project and demonstrate an understanding of the essential tools of data analysis, which includes distinguishing between statistical and systematic errors, detecting propagating errors, and representing data graphically. | **Measure 3.1:** At least 80% of students will score 75% on a formal final project report as assessed by a rubric in ASTR 377 (Experimental Astronomy).  
**Measure 3.2:** At least 80% of students will score 75% on oral presentation of the final project as assessed by a standard rubric in ASTR 377 (Experimental Astronomy). |